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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/781,151	02/17/2004	Xiao-Qi Zhou	200310352-1	6042

22879 7590 07/31/2006

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EXAMINER

JACKSON, MONIQUE R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/781,151

Applicant(s)

ZHOU ET AL.

Examiner

Monique R. Jackson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed 5/2/06 has been entered. New claim 31 has been added. Claims 1-31 are pending in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 31 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 31 recites that the receiving layers are “devoid of binder” however it is noted that “a discharge control agent”, particularly the instantly claimed polyelectrolyte or sulfonated polystyrene reads upon the term “binder” and hence the claim is indefinite since the term “binder” or “devoid of binder” is not clearly defined.

Claim Rejections - 35 USC § 103

5. Claims 1-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Malhotra (USPN 5,709,976) in view of Cartier. Malhotra teaches a coated paper suitable for both ink jet printing processes and electrostatic printing process such as electrophotography including color copiers, wherein the coated paper comprises (a) a substrate; (b) a hydrophobic barrier layer present on both sides and containing a water-insoluble binder and water or alcohol soluble anticurling agents (“*base coating layers*”); and (c) image receiving coatings situated on the top of both hydrophobic barrier layers (Abstract; Col. 4, lines 1-27, 37-41, and 51-61; Col. 28, lines

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1-4.) Malhotra teaches that the substrate is preferably a paper substrate made of sized blends of wood kraft fibers that can be internally reinforced with a synthetic resin (Col. 5, line 44-Col. 6, line 15.) Both sides of the substrate are coated with hydrophobic barrier layers having a typical thickness from about 0.1 to about 10 microns, wherein the barrier layers comprise a suitable polymer hydrophobic component such as polyurethane or polysiloxane, and a suitable anticurling agent such as those in Col. 10, line 45-Col. 11, line 44.) Malhotra teaches that the receiving layers have a typical thickness from 1 to about 25 microns, and include (1) a polymeric binder, (2) a dye fixative, (3) a filler or pigment, (4) a lightfastness inducing agent, and (5) a biocide; or in the case of toner receiving layers (1) a polymeric binder, (2) an antistatic agent, (3) a lightfastness inducing agent, (4) a filler or pigment, and (5) an optional biocide (Abstract; Col. 6, line 61-Col. 7, line 23.) Malhotra teaches that a preferred composition range for the toner receiving coating is about 10 to about 35 weight parts binder, about 3 to about 5 weight parts antistatic agent, about 0.4 to about 8 weight parts lightfastness inducing agent, about 86 to about 50 weight parts filler, and about 0.6 to about 2 weight parts biocide; based on 100 parts total (Col. 7, line 63-Col. 8, line 6.) Malhotra teaches that suitable dye fixatives and antistatic agents including quaternary acrylic copolymer latexes, monoammonium compounds, phosphonium compounds, and sulfosuccinates and sulfosuccinamates as antistatic components (Col. 16, line 65-Col. 20, line 50.) Malhotra further teaches that the filler components include hollow microspheres, solid microspheres, inorganic pigments such as calcium carbonate, clay, zinc oxide, titanium dioxide, hydrated alumina, and barium sulfate as well as fluorescent pigments, and mixtures of two or more (Col. 24, line 26-Col. 25, line 31.)

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Hence, Malhotra teaches a media sheet for color electrophotographic printing comprising a) base stock, b) base coating layers coated on both sides of the base stock and comprising binder and anticurling agents, and c) receiving layers, different from the base coating layers, coated directly on the base coating layers, wherein the receiving layers include binder, antistatic agents, and fillers or pigments including hollow particle pigments, both inorganic or polymeric, as well as inorganic pigments as instantly claimed. Though Malhotra does not specifically teach that the base coating layers also comprise inorganic pigments and a discharge control agent or antistatic agent as in the receiving layers, and that the antistatic or discharge control agent is a polyelectrolyte or sulfonated polystyrene as instantly claimed, one having ordinary skill in the art at the time of the invention would have been motivated to include conventional additives such as the disclosed pigments and fillers into the base layers as well, and further, Chartier et al teach that by incorporating a discharge control agent, such as the instantly claimed sodium salt of a highly sulfonated polystyrene, into the coating of a coated paper substrate, improvements are provided in terms of feeding properties when the coated paper is utilized in a friction-feed printing process. Hence, based on the teachings of Chartier et al, it would have been obvious to one having ordinary skill in the art at the time of the invention to provide a discharge control agent, such as a sodium salt of a highly-sulfonated polystyrene, in the paper coating compositions of the invention taught by Malhotra, in a sufficient amount (such as 6 weight parts as taught in the example by Chartier et al) and molecular weight to provide the desired conductive properties to reduce the electrostatic charges generated by friction in printer or photocopier paper feeds, as taught by Chartier et al (Col. 3, lines 21-59.) Further, one having ordinary skill in the art would have been motivated to utilize routine experimentation to

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determine the optimum content of each component, the coating thickness or coating weight, and optimum pigment particle size and particle size distribution to utilize in the coating layers based on the desired color, coating and matting properties, and particular end use, wherein ranges as instantly claimed are typical in the art. With regards to Claims 3 and 4, though Malhotra teaches that the substrate is preferably paper made from woody fibers internally reinforced with synthetic resin, it is well known in the art that plastic films are suitable synthetic materials equivalent to woody paper substrates for use in producing coated printing medium and one having ordinary skill in the art at the time of the invention would have been motivated to utilize polymer films as the base and/or determine a suitable base material and internal bond strength for a particular end use of the printing medium.

Response to Arguments

6. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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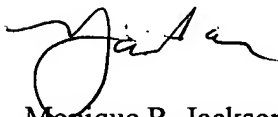
however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Monique R. Jackson whose telephone number is 571-272-1508.

The examiner can normally be reached on Mondays-Thursdays, 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Monique R. Jackson
Primary Examiner
Technology Center 1700
July 24, 2006